AMENDMENTS

In The Claims:

1. (previously presented) A method for determining a hopping sequence for selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising the steps of:

(a) measuring Np data collision ratios respectively corresponding to Np partitions, responsive to a RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

(b) selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a selection function H(p), wherein the selection function is a linear combination of the data collision ratio R(i), p being from 1 through Q and denoting a pth partition sequence;

(c) mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels; and

(d) responsive to a control signal, selecting one of the first sequence and the second sequence as the hopping sequence.

2. (previously presented) A method for determining a hopping sequence for selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np

Application No.: 09/759,677   Docket No.: JCLA9801

and Q being positive integers, comprising the steps of:

(a) responsive to a RF signal, detecting an interference event within the RF signal;

(b) measuring Np data collision ratios respectively corresponding to Np partitions, responsive to

the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and

denoting an ith partition;

(c) selecting a partition sequence from Q partition sequences, said partition sequence having a

smallest value of a selection function H(p), wherein the selection function is a linear combination

of the data collision ratio R(i), p being from 1 through Q and denoting a pth partition sequence;

(d) mapping the first sequence of M channels to the selected partition sequence to produce a

second sequence of M channels;

(e) responsive to a control signal, selecting one of the first sequence and the second sequence to

obtain a third sequence;

(f) sorting R(i) of Np data collision ratios from a highest to a lowest to obtain T most interfered

partitions, wherein T is a predetermined value; and

(g) rearranging the third sequence to obtain the hopping sequence in a predetermined manner, as

an interference event is detected in step (a) and the detected interference event occurs is within T

most interfered partitions.

3. (previously presented) A method for determining a hopping sequence for selecting a

channel from M channels divided into Np partitions to reduce probability of data collision in a

frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the

host apparatus receiving a sequence of M channels, M and Np being positive integers,

comprising the steps of: (a) responsive to a RF signal, detecting an interference event within the

Page 3 of 23

RF signal;

(b) measuring Np data collision ratios respectively corresponding to Np partitions, responsive to

the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and

denoting an ith partition;

(c) sorting R(i) of Np data collision ratios from a highest to a lowest to obtain T most interfered

partitions, wherein T is a predetermined value; and

(d) rearranging the sequence to obtain the hopping sequence in a predetermined manner, as an

interference event is detected in step (a) and the detected interference event occurs is within T

most interfered partitions.

4. (previously presented) The method as depicted in claim 1, wherein the frequency

hopping spread spectrum communication system includes frequency hopping spread spectrum

multiple access (FHSSMA) communication systems.

5. (previously presented) The method as depicted in claim 1, wherein step (a) further

comprises the steps of:

(e) counting a number of interference events E and number of interference-free events En

corresponding to each of Np partitions; and

(f) calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

6. (previously presented) The method as depicted in claim 1, wherein step (b) is

performed such that a regulation over band utilization in the frequency hopping spread spectrum

communication system is met.

7. (previously presented) The method as depicted in claim 1, wherein step (b) is

performed such that a traffic requirement or a traffic characteristic in the frequency hopping

spread spectrum communication system is met.

8. (original) The method as depicted in claim 7, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

9. (original) The method as depicted in claim 7, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

10. (previously presented) The method as depicted in claim 9, wherein a relative frequency of occurrence in step (b) is only counted over the reserved time slot.

11. (previously presented) The method as depicted in claim 1, wherein between step (b) and step (c) further comprises the steps of:

(h) negotiating with one of multiple peer devices to determine whether the peer device supports said Q partition sequences;

(i) selectively crosschecking with other peer devices to determine whether other peer devices support the selected partition sequence; and

(j) responsive to the results of step (h) and (i), selectively generating the control signal.

12. (original) The method as depicted in claim 11, further comprising the step of maintaining a directory in the host apparatus to record peer devices supporting Q partition sequences and the hopping sequence currently selected for communicating with a peer device.

13. (original) The method as depicted in claim 11, wherein the multiple peer devices include a first type of peer device external to the host apparatus and a second type of peer device integral with the host apparatus.

14. (previously presented) The method as depicted in claim 2, wherein step (b) further comprises the steps of:

Page 5 of 23

(h) counting a number of interference events E and number of interference-free events En

corresponding to each of Np partitions; and

(i) calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

15. (previously presented) The method as depicted in claim 2, wherein step (c) is

performed such that a regulation over band utilization in the frequency hopping spread spectrum

communication system is met.

16. (previously presented) The method as depicted in claim 2, wherein step (c) is

performed such that a traffic requirement or a traffic characteristic in the frequency hopping

spread spectrum communication system is met.

17. (original) The method as depicted in claim 16, wherein said traffic characteristic

includes traffic pattern of a synchronous type and an asynchronous type.

18. (original) The method as depicted in claim 16, wherein said traffic requirement

includes a reserved time slot for transmitting or receiving information.

19. (previously presented) The method as depicted in claim 18, wherein a relative

frequency of occurrence in step (c) is only counted over the reseed time slot.

20. (previously presented) The method as depicted in claim 2, wherein between step (c)

and step (d) further comprises the steps of:

(h) negotiating with one of multiple peer devices to determine whether the peer device supports

said Q partition sequences;

(i) selectively crosschecking with other peer devices to determine whether other devices support

the selected partition sequence; and

(j) responsive to the results in step (h) and (i), generating the control signal.

Page 6 of 23

Application No.: 09/759,677   Docket No.: JCLA9801

21. (original) The method as depicted in claim 20, further comprising the step of maintaining a directory in the host apparatus to record peer devices supporting Q partition sequences and the hopping sequence currently selected for communicating with a peer device.

22. (original) The method as depicted in claim 20, wherein the multiple peer devices include a first type of peer device external to the host apparatus and a second type of peer device integral with the host apparatus.

23. (previously presented) The method as depicted in claim 2, wherein the predetermined manner in step (g) includes the step of:
moving channels in the third sequence, corresponding to a partition within which the interference event is detected, toward end of the third sequence to obtain the hopping sequence.

24. (previously presented) The method as depicted in claim 2, wherein step (g) is performed such that a regulation over band utilization in the frequency hopping spread spectrum communication system is met.

25. (previously presented) The method as depicted in claim 2, wherein step (g) is performed such that a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system is met.

26. (original) The method as depicted in claim 25, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

27. (original) The method as depicted in claim 25, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

28. (previously presented) The method as depicted in claim 3, wherein step (b) further comprises the steps of:

(e) counting a number of interference events E and number of interference-free events En

corresponding to each of Np partition; and

(f) calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

29. (previously presented) The method as depicted in claim 3, wherein the predetermined

manner in step (d) includes the step of:

moving channels in a third sequence, corresponding to a partition within which the interference

event is detected, toward end of the third sequence to obtain the hopping sequence.

30. (previously presented) The method as depicted in claim 3, wherein step (d) is

performed such that a regulation over band utilization in the frequency hopping spread spectrum

communication system is met.

31. (previously presented) The method as depicted in claim 3, wherein step (d) is

performed such that a traffic requirement or a traffic characteristic in the frequency hopping

spread spectrum communication system is met.

32. (original) The method as depicted in claim 31, wherein said traffic characteristic

includes traffic pattern of a synchronous type and an asynchronous type.

33. (original) The method as depicted in claim 31, wherein said traffic requirement

includes a reserved time slot for transmitting or receiving information.

34. (previously presented) An apparatus, said apparatus determining a hopping sequence

for selecting a channel from M channels divided into Np partitions to reduce probability of data

collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus

storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being

positive integers, comprising:

Page 8 of 23

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np

partitions, responsive to a RF signal, said Np data collision ratios having value of R(i), i being

from 1 through Np and denoting an ith partition;

a first selector for selecting a partition sequence from Q partition sequences, said partition

sequence having a smallest value of a selection function H(p), wherein the selection function is a

linear combination of the data collision ratio R(i), p being from 1 through Q and denoting a pth

partition sequence;

a mapping circuit for mapping the first sequence of M channels to the selected partition sequence

to produce a second sequence of M channels; and

a second selector, responsive to a control signal, for selecting one of the first sequence and the

second sequence as the hopping sequence.

35. (previously presented) An apparatus, said apparatus determining a hopping sequence

for selecting a channel from M channels divided into Np partitions to reduce probability of data

collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus

storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being

positive integers, comprising:

a detector circuit, responsive to a RF signal, for detecting an interference event within the RF

signal;

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np

partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being

from 1 through Np and denoting an ith partition;

a first selector for selecting a partition sequence from Q partition sequences, said partition

sequence having a smallest value of a selection function H(p), wherein the selection function is a linear combination of the data collision ratio R(i), p being from 1 through Q and denoting a pth partition sequence;

a mapping circuit for mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels;

a second selector, responsive to a control signal, for selecting one of the first sequence and the second sequence to obtain a third sequence;

a sorting circuit for sorting R(i) of Np data collision ratios from a highest to a lowest to obtain T most interfered partitions, wherein T is a predetermined value; and

a rearrangement circuit for rearranging the third sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected by the detector circuit and the detected interference event occurs is within T most interfered partition.

36. (previously presented) An apparatus, said apparatus determining a hopping sequence for selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus receiving a sequence of M channels, M and Np being positive integers, comprising: a detector circuit, responsive to a RF signal, for detecting an interference event within the RF signal;

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

a sorting circuit for sorting R(i) of Np data collision ratios from a highest to a lowest to obtain T most interfered partitions, wherein T is a predetermined value; and

a rearrangement circuit for rearranging the sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected by the detector circuit and the detected interference event occurs is within T most interfered partitions.

37. (previously presented) The apparatus as depicted in claim 34, wherein the frequency hopping spread spectrum communication system includes frequency hopping spread spectrum multiple access (FHSSMA) communication system.

38. (previously presented) The apparatus as depicted in claim 34, wherein the measurement circuit further comprises:

a counter for counting a number of interference events E and number of interference-free events En corresponding to each of Np partitions; and

a calculation circuit for calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

39. (previously presented) The apparatus as depicted in claim 34, wherein the partition sequence selected by the first selector is such that meets a regulation over band utilization in the frequency hopping spread spectrum communication system.

40. (previously presented) The apparatus as depicted in claim 34, wherein partition sequence selected by the first selector is such that meets a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system.

41. (original) The apparatus as depicted in claim 40, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

42. (original) The apparatus as depicted in claim 40, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

Page 11 of 23

43. (previously presented) The apparatus as depicted in claim 42, wherein a relative frequency of occurrence used by the first calculation circuit is only counted over the reserved time slot.

44. (original) The apparatus as depicted in claim 34, further comprises

a negotiating circuit for negotiating with one of multiple peer devices to determine whether the peer device supports said Q partition sequences;

a crosschecking circuit for selectively crosschecking with other peer devices to determine whether other peer devices support the selected partition sequence; and

a controller circuit, responsive to the results of negotiation by the negotiation circuit and the crosscheck by the crosschecking circuit, for generating the control signal.

45. (original) The apparatus as depicted in claim 44, further comprising a directory to record peer devices supporting Q partition sequences and the hopping sequence currently selected for communicating with a peer device.

46. (original) The apparatus as depicted in claim 44, wherein multiple peer devices include a first type of peer device external to the apparatus and a second type of peer device integral with the apparatus.

47. (previously presented) The apparatus as depicted in claim 35, wherein the measurement circuit further comprises:

a counter for counting a number of interference events E and number of interference-free events En corresponding to each of Np partitions; and

a calculation circuit for calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

Application No.: 09/759,677   Docket No.: JCLA9801

48. (previously presented) The apparatus as depicted in claim 35, wherein the partition

sequence selected by the first selector is such that meets a regulation over band utilization in the

frequency hopping spread spectrum communication system.

49. (previously presented) The apparatus as depicted in claim 35, wherein partition

sequence selected by the first selector is such that meets a traffic requirement or a traffic

characteristic in the frequency hopping spread spectrum communication system.

50. (original) The apparatus as depicted in claim 49, wherein said traffic characteristic

includes traffic pattern of a synchronous type and an asynchronous type.

51. (original) The apparatus as depicted in claim 49, wherein said traffic requirement

includes a reserved time slot for transmitting or receiving information.

52. (previously presented) The apparatus as depicted in claim 51, wherein a relative

frequency of occurrence used by the first calculation circuit is only counted over the reserved

time slot.

53. (original) The apparatus as depicted in claim 35, further comprising:

a negotiating circuit for negotiating with one of multiple peer devices to determine whether the

peer device supports said Q partition sequences;

a crosschecking circuit for selectively crosschecking with other peer devices to determine

whether other devices support the selected partition sequence; and

a controller circuit, responsive to the results of negotiation by the negotiation circuit and the

crosscheck by the crosschecking circuit, for generating the control signal.

54. (original) The apparatus as depicted in claim 53, further comprising a directory to

record peer devices supporting Q partition sequences and the hopping sequence currently

Page 13 of 23

Application No.: 09/759,677   Docket No.: JCLA9801

selected for communicating with a peer device.

55. (original) The apparatus as depicted in claim 53, wherein multiple peer devices

include a first type of peer device external to the apparatus and a second type of peer device

integral with the apparatus.

56. (previously presented) The apparatus as depicted in claim 35, wherein the

predetermined manner performed by the rearrangement circuit includes the step of:

moving channels in the third sequence, corresponding to a partition within which the interference

event is detected, toward end of the third sequence to obtain the hopping sequence.

57. (previously presented) The apparatus as depicted in claim 35, wherein the operation

of the rearrangement circuit meets a regulation over band utilization in the frequency hopping

spread spectrum communication system.

58. (previously presented) The apparatus as depicted in claim 35, wherein the operation

of the rearrangement circuit meets a traffic requirement or a traffic characteristic in the frequency

hopping spread spectrum communication system.

59. (original) The apparatus as depicted in claim 58, wherein said traffic characteristic

includes traffic pattern of a synchronous type and an asynchronous type.

60. (original) The apparatus as depicted in claim 58, wherein said traffic requirement

includes a reserved time slot for transmitting or receiving information.

61. (previously presented) The apparatus as depicted in claim 36, wherein the

measurement circuit further comprises:

a counter for counting a number of interference events E and number of interference-free events

En corresponding to each of Np partitions; and

Page 14 of 23

a second calculation circuit for calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

62. (previously presented) The apparatus as depicted in claim 36, wherein the predetermined manner performed by the rearrangement circuit includes step of: moving channels in a third sequence, corresponding to a partition within which the interference event is detected, toward end of the third sequence to obtain the hopping sequence.

63. (previously presented) The apparatus as depicted in claim 36, wherein the operation of the rearrangement circuit meets a regulation over band utilization in the frequency hopping spread spectrum communication system.

64. (previously presented) The apparatus as depicted in claim 36, wherein the operation of the rearrangement circuit meets a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system.

65. (original) The apparatus as depicted in claim 64, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

66. (original) The apparatus as depicted in claim 64, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

67. (currently amended) The method as depicted in claim 1, wherein the selection function H(p) in step (1.2b) is a summation of R(i)* relative frequency of occurrence of the ith partition in each of Q partition sequences, p being from 1 through Q and denoting the pth partition sequence.

68. (currently amended) A method for determining a hopping sequence for selecting a channel from M channels divided into Np partition to reduce probability of data collision in a

Page 15 of 23

frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising the steps of:

~~(1)~~(a) measuring Np data collision ratios respectively corresponding to Np partitions, responsive to a RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

~~(2)~~(b) selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a predetermined selection function H(p) to minimize the average probability of data collision, p being from 1 through Q and denoting a pth partition sequence;

~~(3)~~(c) mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels; and

~~(4)~~(d) responsive to a control signal, selecting one of the first sequence and the second sequence as the hopping sequence.

69. (previously presented) The method as depicted in claim 2, wherein the selection function H(p) in step (c) is a summation of R(i)* relative frequency of occurrence of the ith partition in each of Q partition sequences, p being from 1 through Q and denoting the pth partition sequence.

70. (currently amended) A method for determining a hopping sequence for selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising the steps of:

(1)(a) responsive to a RF signal, detecting an interference event within the RF signal;

(2)(b) measuring Np data collision ratios respectively corresponding to Np partitions, responsive

to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np

and denoting an ith partition;

(3)(c) selecting a partition sequence from Q partition sequences, said partition sequence having a

smallest value of a predetermined selection function H(p) to minimize the average probability of

data collision, p being from 1 through Q and denoting a pth partition sequence;

(4)(d) mapping the first sequence of M channels to the selected partition sequence to produce a

second sequence of M channels;

(5)(e) responsive to a control signal, selecting one of the first sequence and the second sequence

to obtain a third sequence;

(6)(f) sorting R(i) of Np data collision ratios from a highest to a lowest to obtain T most

interfered partitions, wherein T is a predetermined value; and

(7)(g) rearranging the third sequence to obtain the hopping sequence in a predetermined manner,

as an interference event is detected in step (1)(a) and the detected interference event occurs is

within T most interfered partitions.

71. (previously presented) The apparatus as depicted in claim 34, wherein the selection

function H(p) is a summation of R(i)* relative frequency of occurrence of the ith partition in

each of Q partition sequences, p being from 1 through Q and denoting the pth partition sequence.

72. (previously presented) An apparatus, said apparatus determining a hopping sequence

for   selecting a channel from M channels divided into Np partitions to reduce probability of data

collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus

Application No.: 09/759,677   Docket No.: JCLA9801

storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being

positive integers, comprising:

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np

partitions, responsive to a RF signal, said Np data collision ratios having value of R(i), i being

from 1 through Np and denoting an ith partition;

a first selector for selecting a partition sequence from Q partition sequences, said partition

sequence having a smallest value of a predetermined selection function H(p) to minimize the

average probability of data collision, p being from 1 through Q and denoting a pth partition

sequence;

a mapping circuit for mapping the first sequence of M channels to the selected partition sequence

to produce a second sequence of M channels; and

a second selector, responsive to a control signal, for selecting one of the first sequence and the

second sequence as the hopping sequence.

73. (currently amended) The apparatus as depicted in claim 35, wherein the selection

~~fiction~~ function H(p) is a summation of R(i)* relative frequency of occurrence of the ith partition

in each of Q partition sequences, p being from 1 through Q and denoting the pth partition

sequence.

74. (previously presented) An apparatus, said apparatus determining a hopping sequence

for selecting a channel from M channels divided into Np partitions to reduce probability of data

collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus

storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being

positive integers, comprising:

Page 18 of 23

a detector circuit, responsive to a RF signal, for detecting an interference event within the RF signal;

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

a first selector for selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a predetermined selection function H(p) to minimize the average probability of data collision, p being from 1 through Q and denoting a pth partition sequence;

a mapping circuit for mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels;

a second selector, responsive to a control signal, for selecting one of the first sequence and the second sequence to obtain a third sequence;

a sorting circuit for sorting R(i) of Np data collision ratios from a highest to a lowest to obtain T most interfered partitions, wherein T is a predetermined value; and

a rearrangement circuit for rearranging the third sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected by the detector circuit and the detected interference event occurs is within T most interfered partitions.

Claim 75. (canceled)

76. (currently amended) A method for determining a hopping sequence for selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the

Page 19 of 23

host apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np

and Q being positive integers, comprising the steps of:

(1)(a) responsive to a RF signal, detecting an interference event within the RF signal;

(2)(b) measuring Np data collision ratios respectively corresponding to Np partitions, responsive

to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np

and denoting an ith partition;

(3)(c) selecting a partition sequence from Q partition sequences, said partition sequence having a

smallest value of a selection value H(p), wherein the selection value is a summation of R(i)*

number of occurrence of the ith partition in each of Q partition sequences, p being from 1

through Q and denoting a pth partition sequence;

(4)(d) mapping the first sequence of M channels to the selected partition sequence to produce a

second sequence of M channels;

(5)(e) responsive to a control signal, selecting one of the first sequence and the second sequence

to obtain a third sequence;

(6)(f) rearranging the third sequence to obtain the hopping sequence in a predetermined manner,

as an interference event is detected in step (1)(a).

Claim 77. (canceled)

78. (previously presented) An apparatus, said apparatus determining a hopping sequence

for selecting a channel from M channels divided into Np partitions to reduce probability of data

collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus

storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being

positive integers, comprising:

Page 20 of 23

Application No.: 09/759,677   Docket No.: JCLA9801

a detector circuit, responsive to a RF signal, for detecting an interference event within the RF

signal;

a measurement circuit for meaning Np data collision ratios respectively corresponding to Np

partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being

from 1 through Np and denoting an ith partition;

a first selector for selecting a partition sequence from Q partition sequences, said partition

sequence having a smallest value of a selection value H(p), wherein the selection value is a

summation of R(i)* number of occurrence of the ith partition in each of Q partition sequences, p

being from 1 through Q and denoting a pth partition sequence;

a mapping circuit for mapping the first sequence of M channels to the selected partition sequence

to produce a second sequence of M channels;

a second selector, responsive to a control signal, for selecting one of the first sequence and the

second sequence to obtain a third sequence; and

a rearrangement circuit for rearranging the third sequence to obtain the hopping sequence in a

predetermined manner, as an interference event is detected by the detector circuit.

      Claim 79. (canceled)